



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,392	12/16/2005	Stephen Bardell	41557-218986 RK	1197
26694	7590	12/06/2007		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			EXAMINER LEE, BENNY T	
			ART UNIT 2817	PAPER NUMBER
			MAIL DATE 12/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/537,392	Applicant(s) BARDELL ET AL.	
	Examiner Benny Lee	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10; 11; 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The disclosure is objected to because of the following informalities: Page 2, line 30, note that a --,-- should be inserted after “embodiment” for grammatical clarity. Page 3, line 1, note that “FIGURES” should be rewritten as --DRAWINGS-- for consistency with PTO guidelines; line 16, note that --DETAIL-- should be inserted prior to “DESCRIPTION” for consistency with PTO guidelines; line 19, note that --and may not be described in detail in the different drawing figures-- should be inserted after “specification” for clarity of description; line 22, note that --in Figure 1-- should be inserted after “generally” for consistency with the drawing figure. Page 4, line 32, note that --(see Figure 2)-- should be inserted after “17” for clarity of description. Page 4, line 35 & page 5, line 14, note that --as shown in Figure 2a-- should be inserted after “15” & “vacuum”, respectively for consistency with the drawing figure. Page 5, lines 5, 10, note that --(see Figure 2a)-- should be inserted after “18” & “19”, respectively for consistency with the drawing figure. Appropriate correction is required.

The drawings are objected to because in Figures 1 & 1a, these drawing figures need to be labeled as --PRIOR ART-- for consistency with the specification description thereof.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “means” comprises of a “plurality of members” (e.g. claim 4) & the drift tube assembly (e.g. claims 8, 11), respectively must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The "means" being comprised of a "plurality of members" (e.g. claim 4) and the drift tube assembly (e.g. claims 8, 11) needs a corresponding description in the specification.

Claims 2-5, 9, 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2, 4, note that the recitation of the "first" one of the "first and second components" lacks strict antecedent basis.

In claim 9, note that "the part" lacks strict antecedent basis in its dependence from "claim 10".

In claim 11, note that it is unclear whether the recitation "to allow relative sliding movement of the drift tube assembly relative to the wall" is an appropriate characterization. Note from the embodiment of Figs. 2 & 2a that it appears that the "wall" is the element which is in "relative sliding movement" with respect to the fixed "drift tube assembly". Clarification is needed.

The following claims have been found to be objectionable for reasons set forth below:

In claim 5, note that the recitation "an annulus" should be rephrased as --a respective annulus-- for an appropriate characterization.

In claims 7, 10, 13, note that "is of ceramic" should be rephrased as --is comprised of ceramic material-- for an appropriate characterization.

In claims 11, 12, line 2 of each claim, note that "forming" should be rewritten as --comprising-- for an appropriate characterization.

In claim 12, line 5, note that "of" should be rewritten as --between-- for an appropriate characterization.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-10; 11; 12-14, 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by any one of Esterson et al, Heppinstall et al and Preist et al (each cited by applicants').

Note that each reference discloses an electron beam tube (e.g. a Klystron, etc) having a longitudinal axis (e.g. the vertical line in Fig. 2 of Esterson et al; axis X-X in Fig. 1 of Heppenstall et al) and a radial axis perpendicular to the longitudinal axis; a wall of ceramic material (e.g. 1 in Fig. 2 of Esterson et al; 6 in Heppinstall et al; 26 in Fig. 2 of Preist et al) for forming a part of a vacuum envelope; a ceramic balance ring (e.g. 12 in Esterson et al; (4, 5) in Heppinstall et al; 33 in Preist et al) attached to the wall; a second component (e.g. copper annuli (2, 3) in Esterson et al; annular shape cylindrical electrodes (1, 3) in Fig. 1 of Heppinstall et al; disk shape end wall 25 in Fig. 1 of Preist et al). Note that a "means" or "member" is interposed between the wall and the second component (e.g. means integral with the balance ring (12) in Esterson et al; means integral with the balance rings (4, 5) in Heppinstall et al; backing member (31) in Preist et al), such that each "means" or "member" provides sliding movement relative to the "second component" (e.g. see column 1, lines 57-61 in Esterson et al; see column 1, lines 55-58 in Heppinstall et al; see column 3, lines 48-51 in Preist et al). Moreover, in each reference, it should be noted that the sliding movement must inherently be limited to movement in a transverse direction by virtue of configuration of the "means" or "member" relative to the "second component". Furthermore, since there is "sliding movement" for the "means" or "members", such "means" or "member" inherently must have a low coefficient of friction to permit such "sliding movement" to occur. Additionally, it should be noted that in each reference, the electron tube can be a klystron type electron beam tube, then such an electron beam tube explicitly or inherently must include a cavity which includes a metal structure or "plate" for supporting and mounting a "drift tube" within the cavity (i.e. which would have corresponding to the "second component" described above), as would have been known to those of ordinary skill

in the art (e.g. see Fig. 1 in Esterson; see column 2, lines 57-62 in Heppinstall et al; see drift tube sections (4, 6, 7) in Preist et al).

Claim 15 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by any one of Esterson et al and Preist et al (each cited by applicants').

Note that end wall (25) in Preist et al is made of copper (e.g. see column 2, line 62). Similarly, note that annuli (2, 3) are also made of copper (e.g. see column 1, line 16).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Esterson et al, Heppinstall et al and Preist et al (each cited by applicants').

Note that each reference discloses the claimed invention except for the particular friction reducing material used (i.e. coating or layer). However, the use of a friction reducing coating or layer would have been considered an obvious design consideration known to those of ordinary

Application/Control Number:
10/537,392
Art Unit: 2817

Page 7

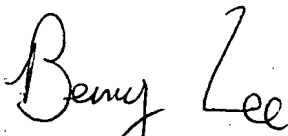
skill in the art, especially since the generic nature of the interposing "means" or "member" would have suggested that any equivalent manner of providing a reduction in friction (i.e. such as to provide the sliding movement) would have been usable therewith, thereby suggesting the obviousness of such a modification.

The prior art citation to GB 2172425 made by applicants' in their PTOL-1449 has not been considered since no copy of this citation appears to have been provided by applicants'.

Thus this citation has been stricken through in the PTOL-1449.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817